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Information Science and Technology Center Seminar

Dileep George
Co-Founder of Numenta

"How to build a brain without solving it"

Wednesday, October 13, 2010
3:00 - 4:00 PM
TA-3, Bldg. 1690, Room 102 (CNLS Conference Room)

Abstract: Building systems that match and exceed human intelligence is an outstanding problem at the intersection of many scientific and engineering disciplines. Many researchers now accept that understanding the principles of operation of our brains is a necessary step in creating intelligent machines. However, reverse-engineering the brain is challenging because many of the features of biological organization in the brain are not information processing related. To be effective in building and debugging practical models based on neocortical principles, it is important to ensure that only hypothesis-supported and computationally relevant features from the neurobiology are included in the models. I will describe a methodology for doing that and illustrate it using lessons from buidling biologically inspired vision systems. Relevant paper: http://www.ploscompbiol.org/doi/pcbi.1000532

Biography: Dileep George, PhD – Previously CTO of Numenta, an AI company he cofounded with Jeff Hawkins and Donna Dubinsky. At Numenta, Dileep pioneered the development of biologically-inspired machine learning algorithms that now power several commercial applications. Before Numenta, Dileep was a research fellow at the Redwood Neuroscience Institute. Dileep has authored 22 patents and many influential papers on the mathematics of brain circuits. His research has been featured in the New York Times, BusinessWeek, Scientific Computing, Wired, and several academic journals. Dileep earned his MS and PhD in Electrical Engineering from Stanford University, and his BS from IIT in Bombay. Currently Dileep is laying the groundwork for a startup company to build large scale visual recognition systems. Web: www.dileepgeorge.com Blog: www.dileepgeorge.com/blog

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